

Second, that urgent research and development is required to overcome these three principal hindrances of comprehensive systems analysis of waste management today. First, the lack of meaningful environmental objectives which define output requirements of system. Second, the lack of correlation between characteristics, quantities, effluents and the deluge of environmental pollution. Third, the lack of generalized computer-type models of three basic elements of waste management system: the input function, the processing function, and the environmental assimilative function.

I think our waste management study and other California studies have given a positive indication that aerospace techniques will be a useful tool in creation environment in the next few years. The central advantage offered by this tool is the ability to provide decision-makers with more facts on which to base their decisions.

I now would like to turn my attention to comments on the subject with which your committee is concerned at the moment, the adequacy of presently available science and technology for pollution abatement.

From our vantage point at Aerojet General, and based upon our very limited experience with a truly immense and fantastically complex problem, the adequacy of presently available science and technology for pollution abatement cannot be quantitatively assessed. I submit, however, that the following two quantitative statements can be made with some confidence they are right.

The first is that presently available science and technology has not been fully applied to pollution abatement as yet.

The second statement is that the pollution abatement problem will require new and improved technology to achieve acceptable solutions in the future.

Now, if we try to design a specific course of action based on these statements in order to perhaps arrange for improved application of presently available science and technology and establishment of appropriate research and development program to yield required new and improved technology, we very soon confront the same obstacle we found in our waste management study—the goals we are striving for are not well defined.

If we consider the establishment of goals we find much work remains to be done, and there is no clear channel for its accomplishment.

Now, in this country of ours we have organized ourselves to make effective attacks on other gigantic problems—the defense of our country and the maintaining of our country's leadership in space exploration, to mention two, and we can and will organize ourselves to make an effective attack on pollution abatement.

The leadership of the Federal Government is required to assign appropriate priority to pollution abatement among our other national objectives and to assign clear responsibilities and authorities so that the establishment of goals, and the implementation of programs to achieve these goals can proceed in an orderly fashion.

Now, as we strive toward more effective pollution abatement on a national scale we should proceed immediately on national projects to further develop our techniques of the application of systems approach to pollution problems.

There was a review of the California studies conducted in a series of meetings at Williamsburg in which panel experts convened to spend